

## REMARKS

Reconsideration of this application is respectfully requested.

In the Official Action, the Examiner rejects claim 12 under 35 U.S.C. § 102(b) as being anticipated by Kokai Publication No. 4-329944 (hereinafter "Kokai").

In response, claim 12 has been canceled, thereby rendering the rejection thereof moot. Accordingly, it is respectfully requested that the rejection of claim 12 under 35 U.S.C. § 102(b) be withdrawn.

Additionally, the Examiner rejects claims 1, 7-9, 11 and 13 under 35 U.S.C. § 103(a) as being unpatentable over Kokai in view of U.S. Patent No. 4,943,290 to Rexroth, et al. (hereinafter "Rexroth"). Furthermore, the Examiner rejects claim 10 under 35 U.S.C. § 103(a) as being unpatentable over Kokai and Rexroth and further in view of U.S. Patent No. 5,846,241 to Kittur, et al. (hereinafter "Kittur").

With regard to claims 11 and 13, the same have been canceled, thereby rendering the rejection thereof moot. Accordingly, it is respectfully requested that the rejection of claims 11 and 13 under 35 U.S.C. § 103(a) be withdrawn.

With regard to the remaining rejections of claims 1 and 7-10, independent claim 1 has been amended to clarify its distinguishing features. Specifically, claim 1 has been amended to recite:

"an electrically insulative flexible sheath having one flow channel inside, a distal end portion and a proximal end portion, the distal end portion of the sheath having a distal opening and an axis;

...

a liquid feed portion which is provided on the proximal end side of the sheath and feeds a liquid through the one flow channel inside the sheath towards the distal opening; and

a plurality of openings for liquid feed which are formed in the support member, the plurality of openings for liquid feed being

arranged around the slide hole to prevent the rod-shaped portion from the entering therein, communicating to the one flow channel, and partially blocking flow from of the liquid fed in the vicinity of the distal end portion by the liquid feed portion.”

The amendment to claim 1 is fully supported in the original disclosure, such as at page 6, lines 20 and 21 of the specification and at Figures 1A (reference numerals 2 and 2a), 1B and 2. Thus, no new matter has been introduced into the disclosure by way of the present amendment to independent claim 1.

Thus, the radio knife of claim 1 now recites the following features resulting in the following exemplary advantages:

(a) The rod-shaped portion (e.g., 12) inserted to the slide hole (e.g., 18), in which the rod-shaped portion is reliably supported, thereby avoiding the electrode portion from wobbling;

(b) The fluid is injected from the liquid feed portion to the internal space (e.g., 2a) having a wide opening, which forms one flow path, thus making it possible to receive a large amount of fluid; and

(c) The bleeding portion is then washed vigorously by means of a plurality of openings (e.g., 19) for liquid feed provided at the distal end, and thus the bleeding point is clearly located, thereby making it possible to carry out a quick and reliable hemostatic treatment for the bleeding.

With the features (b) and (c) in particular, the radio knife of claim 1 can realize transfer of a physiological saline or the like to the opening portion (e.g., 19) for liquid feed smoothly at a low fluid loss resistance due to the internal space (e.g., 2a) which continues from its large opening. Thus, it becomes possible to clean the bleeding portion appropriately with a burst of saline by the equation of continuity of liquid. Applicants respectfully submit

that such an advantageous effect is not disclosed or contemplated by the prior art, including the references cited by the Examiner.

Kokai does not describe that the opening-for liquid feed is arranged around the slide hole to prevent the rod-shaped portion from entering therein. (Kokai does not disclose that the opening is arranged around the slide hole.) The Examiner argues that the features of the electric surgical device of Rextroth are the liquid feed portion (16) and an opening (72D, Figure 12) irrelevantly provided in the vicinity of the slide hole. However, the opening (72D) for liquid feed shown in Figure 12 has no closing section. Applicants submit that with such a wide opening having no closing portion, a reliable hemostatic treatment cannot be carried out. More specifically it is not possible to clearly locate the bleeding point by washing the bleeding portion with a burst of liquid and handle the bleeding quickly.

The Examiner further argues, based on the illustration of Figure 14 of Rextroth, that the insulative tip defines the slide hole for the rod-shaped electrode shaft (50), and the slide hole has a diameter smaller than that of the opening of the distal end. However, Figure 14 of such reference shows that the electrode shaft 50 is merely supported by the support walls 100-102, and a slide “hole” is not formed. With such a structure, the support for the electrode shaft is not stable, or it is difficult to slide the electrode shaft smoothly. Also, the outburst power of the liquid is propagated to the electrode shaft, thereby making it difficult to stably support the electrode shaft.

Further, merely as a matter of illustration, the cross section of the support walls 100 to 102 in the vicinity of the distal end is indicated in Figure 13, and thus the walls are not limited to the distal end portion, and no such description can be found. That is, Rextroth does not have “one flow channel.” In other words, 3 spaces are created by the three support walls

100 to 102 to continue over the entire sheath, and thus the contact area to the fed liquid becomes very large, thereby increasing the tube path resistance. A person having ordinary skill in the art would be able to easily understand that due to the above, a sufficient amount of liquid fed is not possible.

As described above, with the invention shown in Figure 14 of Rextroth, it is not possible to realize a smooth transfer of saline or the like at a low fluid loss resistance or washing of a bleeding portion appropriately with a burst of liquid from the channels 96 to 98. Such a technique can be realized by one flow channel with a wide opening as in the radio knife of claim 1.

With regard to Kittur, Applicants submit that the opening corresponds to the internal space which directly forms the opening for liquid feed, and for the entire length, the diameter of the opening is maintained.

Thus, Applicants respectfully submit that none of the cited references disclose or suggest at least the "one flow channel" and the plurality of openings for liquid feed being arranged around the slide hole to prevent the rod-shaped portion from entering therein, communicating to the flow channel, and partially blocking flow of the liquid fed in the vicinity of the distal end portion by the liquid feed portion" as is now recited in independent claim 1. The stated objectives and advantages of the radio knife of claim 1 can be achieved when both such features are provided. Such advantages are not disclosed or contemplated by the prior art, including the cited references.

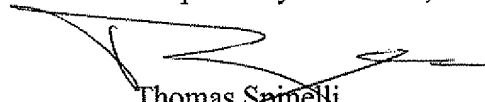
With regard to the rejections of claims 1 and 7-10 under 35 U.S.C. § 103(a), independent claim 1, as amended, is not rendered obvious by the cited references because neither the Kokai application, the Rexroth patent nor the Kittur patent, whether taken alone or

in combination, teach or suggest a radio knife having the features recited in independent claim

1. Accordingly, claim 1, as amended, patentably distinguishes over the prior art and is allowable. Claims 7-10, being dependent upon claim 1, are thus at least allowable therewith. Consequently, the Examiner is respectfully requested to withdraw the rejections of claims 1 and 7-10 under 35 U.S.C. § 103(a).

In view of the above, it is respectfully submitted that this application is in condition for allowance. Accordingly, it is respectfully requested that this application be allowed and a Notice of Allowance issued. If the Examiner believes that a telephone conference with Applicants' attorneys would be advantageous to the disposition of this case, the Examiner is requested to telephone the undersigned.

Respectfully submitted,



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